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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,656	03/29/2004	Noboru Zinbo	Q80744	1122
23373	7590	07/26/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			FALASCO, LOUIS V	
			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/810,656	ZINBO ET AL.	
	Examiner	Art Unit	
	Louis Falasco	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: ____. |

PAPERS RECEIVED

No Information Disclosure Statement has been received.

CLAIMS

The claims are: 1 – 10 all claims are under consideration.

DETAILED ACTION

Statutory Basis

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Objections

Abstract of the Disclosure

1. The Abstract of the disclosure is objected to because the description of the invention in the abstract does not reflect the invention.

In the Abstract the water-soluble anions in a quantity equal to or less than 150 nm, this is a linear measurement not reflecting the quantity of anions as evident from the examples and as evident from instant paragraph [0038]. This should be changed to the 150 ppm as explicitly stated in instant paragraph [0038] of the specification.

Correction is required. See MPEP § 608.01(b).

Specification

2. The specification is objected to because the quantity of water-soluble *anions* is recited in nano meters, a linear quantity - e.g., see paragraph [0015] quantity of *anions* equal to or less than 150 nm. It is evident from the specification this should be 150 ppm - cf paragraph [0038] of the specification and the examples. Correction is required.

Rejections

3. Claims 1 to 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claim 1 calls for water-soluble anions in a quantity equal to or less than 150 nm. It is clearly evident from the specification – see paragraph [0038] and examples, and the improbability of measuring relative amounts by a linear distance, that it should be 150 ppm.

4. Claims 1 to 6 and 8 to 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Doushita et al** (US 2004/076855) in view of either **Kuse et al** (US 2004/0110037) or **Lowery et al** (US 2004/0072030).

Doushita et al teaches a magnetic recording medium comprised of a magnetic layer having ferromagnetic powder in a binder on one surface of a nonmagnetic support, and a backcoat layer comprised a nonmagnetic powders, abrasives and carbon black, in a binder on the opposed surface of the support (paragraphs [0011], [0014], [0034]). **Doushita et al** teaches the nonmagnetic powder having a particle size within the instant claimed range of 5 to 300 nm (diameter) in the backcoat. The backcoat inherently includes water-soluble *anions* and *cations* as a consequence of the presence of carbon black. The carbon black includes furnace black, acetylene black, rubber black etc. (see paragraphs [0063 - 0065], [0077], [0078]). The identical carbon black would be

expected to encompass same properties and include applicants the level of soluble *anions* and *cations* (*cf* instant examples and paragraphs [0063-0064]). Abrasives are included in the backcoat (paragraph [0028], [0081]). These include those of acicular shape (paragraph [0058]). The instant abrasive shapes are identical in shape to the abrasive shapes claimed since they are the matching branded materials - *cf* paragraph [0053] ^w abrasives disclosed instant paragraph [0077]. The claimed *cations* and *anions* are of the identical sources - i.e., powder abrasives and carbon black. The instant claims differ from **Doushita et al** by requiring soluble *cations* equal to or less than 100 ppm and water-soluble *anions* equal to or less than (*sic*) 150 nm - the examiner has assumed 150 ppm based on the disclosure examples and paragraph [0038]. **Doushita et al** does not explicitly calling for any amount of resultant *cations* and *anions* and it may reasonably be concluded that the *cation* and *anion* amounts of **Doushita et al** differ from the instant claims since the formulation examples of **Doushita et al** differ in relative amounts of carbon from applicants (*cf* paragraph [0123] with instant paragraphs [0037] and [0109] and examples). Still however it would be obvious to vary these amounts since **Doushita et al** points out that it would be within the ordinary skill the to optimized the relative proportions as desired for an application (paragraph [0079]).

The claimed, optimized amount resulting in applicants achieving *cations* equal to or less than 100 ppm and water-soluble *anions* equal to or less than 150 ppm is known from **Kuse et al** (see paragraph [0165], and "Components of Paint for Backcoat"- where the carbon black is reduced to amounts applicants disclose as yielding *cations* ≤ 100 ppm

and *anions* \leq 150 ppm (*cf* paragraph [0165] and instant paragraph [0109]). Alternatively this is illustrated by **Lowery et al** at paragraph [0049]¹. **Lowery et al** teaches the range applicants employ to achieve the instant claimed *cations* \leq 100 ppm and *anions* \leq 150 ppm – *cf* instant paragraph [0109].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize soluble levels at *cations* \leq 100 ppm and *anions* \leq 150 ppm by adopting the powder in the backcoat to the levels taught by **Kuse et al** or **Lowery et al** in the recording media of **Doushita et al** for the purpose of decreasing noise (**Kuse et al** paragraph [0008]) and improving durability (**Lowery et al** paragraph [0002]). One skilled in the art would have been motivated to adopt **Kuse et al** or **Lowery et al** with the expectation of decreasing S/N ration and increasing the capacity to withstand wear.

As regards claims 2 and 3 the source of the cations is the carbon black – as also pointed out in the instant disclosure paragraph [0042]

As regard claim 6 see **Doushita et al** paragraph [0118]

As regards the amounts of carbon, binder and abrasive in claims 4, 5, 9, and 10 and the shape, quantity and size are taught as a matter of optimization for the skilled worker to establish (**Doushita et al** paragraph [0053]).

¹ e.g., carbon black is reduced to below 10 parts e.g., $0.13 \times 71.1 = 9.1$ parts

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Doushita et al** in view of either **Kuse et al** or **Lowery et al** as applied to claims 1 to 6 and 8 to 10 above, and further in view of **Ozawa et al** (US 2003/0118869).

The density of protrusions in back coated magnetic recording media is not addressed in **Doushita et al** with either **Kuse et al** or **Lowery et al**. However **Ozawa et al** teaches a backcoat magnetic recording media having a density of protrusions included by this claim as known in the magnetic recording media art (paragraphs [0055], [0064]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adopt the protrusion density shown by **Ozawa et al** in recording media of the primary references for the purpose of improving the signal-to-noise recording characteristics of the media. One skilled in the art would have been motivated to adopt **Ozawa et al** with the expectation of decreasing the unwanted noise.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1 to 6 and 8 to 10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 8 and 13, 14, 18, 21, and 22 of U.S. Patent No. 6875495.

Although the instant claims 1 to 8 are not identical to the claims 1 to 8 and 13, 14, 18, 21, and 22 of U.S. Patent No. 6875495 they are not patentably distinct from the claims of U.S. Patent No. 6875495. The claims of U.S. Patent No. 6875495 differ from the instant claims 1-6 and 8-10 in not explicitly reciting the measure of *cations* equal to or less than 100 ppm and *anions* in equal to or less than 150 (sic) nm (ppm). However the claims of U.S. Patent No. 6875495 are based on the disclosure of ingredients (e.g., carbon black amounts, etc.) which are disclosed in the instant specification (instant paragraph [0109]) inherently yielding the *cations* and *anions* in the recording media in an

equivalent amount (see col. 14 ln 34 et seq. - "Backing Layer Coating Solution" of U.S. Patent No. 6875495) though U.S. Patent No. 6875495 does not measure it².

The instant claims 1 to 10 *also* differ from claims 1 to 8 and 13, 14, 18, 21, and 22 of U.S. Patent No. 6875495 by not requiring the inorganic powder (i.e., carbon black) to cover the acicular oxide particles. However covering would have been inherent since in both the instant application and U.S. Patent No. 6875495 the backcoat is formed with carbon disclosed as kneaded together with the particles (*cf* EXAMPLES at col. 13 ln 64 et seq. U.S. Patent No. 6875495 and the use of the same process with the same ingredients would be expected to produce the same product³.

7. Claim 7 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 8 and 13, 14, 18, 21, and 22 of U.S. Patent No. 6875495 as applied to claims 1 to 6 and 8 to 10 above, and further in view of **Ozawa et al** (US 2003/0118869).

The claims of U.S. Patent No. 6875495 do not call for the density protrusions of claim 7, though the claims of U.S. Patent No. 6875495 are based on a disclosure of the media back having protrusions but with out the amount specified (see col. 5 lns 10-15 and col. 2 ln 4). However **Ozawa et al** teaches back coated magnetic recording media

² If the composition is the same it must have the same properties *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658.

³ A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658

having the density of protrusions included by this claim as known for the magnetic recording media (paragraphs [0055], [0064]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adopt the protrusion density shown by **Ozawa et al** in claims of U.S. Patent No. 6875495 for the purpose of improving the recording characteristics of the media. One skilled in the art would have been motivated to adopt **Ozawa et al** with the expectation of decreasing the unwanted noise.

OTHER REFERENCES

JA 2001-101647 is cited as being of interest further teaching the conventionality of the abrasive particles selected for the backcoat.

JA 10-064041 is cited as being of interest further teaching the conventionality of the binders and additives selected for the backcoat.

JA 11-259851 is cited as being of interest further teaching the conventionality of the sizes selected for the backcoat.

Ikarashi et al (US 6042938) is cited as being of interest teaching the discretionary addition of polymers with ionic groups in the backcoat.

Kitamura et al (US 6777061) is cited as being of interest further teaching the acicular powder in the backcoat.

CONCLUSION

The claims are 1 to 10.

- No claim has been allowed.
- No Information Disclosure Statement has been received.

INQUIRIES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louis Falasco, PhD whose telephone number is (571)272-1507. The examiner can normally be reached on M-F 10:30 - 7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol D. Chaney, PhD can be reached at (571)272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SUPERVISORY PATENT EXAMINER